REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 9 and 14 have been canceled without prejudice or disclaimer, claims 1, 5, 6, 8, 13, 15, 17, 19 and 20 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-8, 10-13 and 15-20 are pending and under consideration. Reconsideration is respectfully requested.

CLAIM OBJECTIONS:

Claims 5 and 6 were objected to because of informalities.

Claim 5 has been amended in accordance with the Examiner's suggestion and is now submitted to be in allowable form. Claim 6 has been amended to correct the typographical error and is now submitted to be in allowable form.

Claims 8 and 13 were objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 8 and 13 have been amended to include, after the term "method," the terminology: "that suppresses a decrease in charged electrical potential and dark decay upon repeated use." Thus, amended claims 8 and 13 are now submitted to be in a form that further limits the subject matter of a previous claim.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action, at page 3, claims 1, 3-6, 8, 9, and 14 were rejected under 35 U.S.C. §112, second paragraph, for the reasons set forth therein. This rejection is traversed and reconsideration is requested.

Claim 1 has been amended for clarity (see pages 5-6, paragraph 24). Claims 15, 17 and 19 have been amended similarly.

Claim 6 was amended to correct the typographical error. Hence, "Formula (1)" has been amended to recite "Formula (2) in amended claim 6, and the structure of Formula (10) is submitted to be correct.

Claims 9 and 14 have been cancelled without prejudice or disclaimer. Thus, the rejection of claims 9 and 14 is now moot.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action, at page 4, claims 1-6 and 8-16 were rejected under 35 U.S.C. §102(b) as being anticipated by JP 07-281456. This rejection is traversed and reconsideration is requested.

Claims 9 and 14 have been cancelled without prejudice or disclaimer.

It is respectfully submitted that it is known that organic compounds are compounds in which elements mainly attached to carbon structures combine, and due to various combinations, a large number of compounds having various characteristics are formed. Even if two compounds differ only by one carbon, the characteristics may be very different. As for isomers, even though the molecular formula is the same, the characteristics of the isomers may be different.

It should be noted that, in the present claimed invention, biphenyl fluorene units of Formula (1) are combined in a main chain (see paragraph [0030] on page 8) to form a main chain with a relatively compact tertiary arrangement, i.e., there is an oxygen of one of the phenyl groups of a first biphenyl fluorene unit coupled to an oxygen of a next one of the phenyl groups of a next biphenyl fluorene unit, and so on. Thus, there is a close proximity of the biphenyl fluorene groups of the electrophotographic photoreceptor of the present invention, which typically causes a higher degree of steric hindrance than is obtained with a longer segment attaching the biphenyl fluorene units.

In contrast, in JP 07-281456, the biphenyl fluorene units are separated by, in addition to two oxygen atoms, a $-C(O)-C_6H_4-C(O)-$ group. As is known to those skilled in the art, the additional length between the biphenyl fluorene units provides for greater spatial flexibility and may alter the reaction and chemical characteristics of the compound. Thus, it is respectfully submitted that the specific geometric arrangement and distance parameters of the compound of Formula 1 of JP 07-281456, as well as the different chemical composition, do not anticipate Formula (1) of the present claimed invention.

Hence, a photoconductor comprising a combination of the compound of Formula 1 of JP 07-281456 with the compound of Formula 2 of JP 07-281456 is submitted not to anticipate, under 35 U.S.C. §102(b), the electrophotographic photoreceptor comprising a combination of the compounds of Formula (1) and Formula (2) of the present invention, as is recited in independent claims 1, 2, 15, 16, 17, 18, 19 and 20. Since claims 3, 4-6, 8, 7, and 10-13 depend from claims 1 and 2, respectively, claims 3, 4-6, 8, 7, and 10-13 are submitted not to be anticipated by JP 07-281456 under 35 U.S.C. §102(b) for at least the reasons that claims 1 and 2 are submitted not to be anticipated by JP 07-281456 under 35 U.S.C. §102(b).

REJECTION UNDER 35 U.S.C. §103:

A. In the Office Action, at page 5, claims 17-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP 07-281456 in view of Handbook of Imaging Material, New York:Marcel-Dekker, Inc. (11/2001) pp. 145-164 to Diamond. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

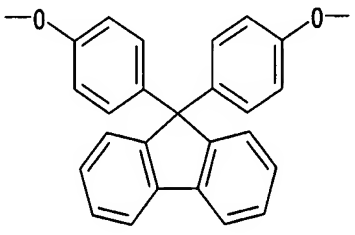
It is respectfully submitted that, as described more fully above, the electrophotographic photoreceptors of claims 17-20 are substantially set forth in claims 1 and 2, and are submitted to be novel over the cited prior art. Said electrophotographic photoreceptors of claims 17-20 are not taught or suggested by JP 07-281456 or the Handbook of Imaging Material, New York:Marcel-Dekker, Inc. (11/2001) pp. 145-164 to Diamond, and thus would not be obvious to utilize in an imaging apparatus or cartridge, as is recited in claims 17-20 of the present invention.

Thus, it is respectfully submitted that claims 17-20 of the present invention are patentable under 35 U.S.C. §103(a) over JP 07-281456 and/or Handbook of Imaging Material, New York:Marcel-Dekker, Inc. (11/2001) pp. 145-164 to Diamond, alone or in combination.

B. In the Office Action, at pages 5-8, claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Katsukawa et al. (USPN 6,187,493) in view of Kanamura et al. (USPN 6,043,334).

Claims 9 and 14 have been cancelled without prejudice or disclaimer.

It is respectfully submitted that Katsukawa et al. fails to disclose, teach or suggest the "naked" biphenyl fluorene repeating unit of Formula (1)

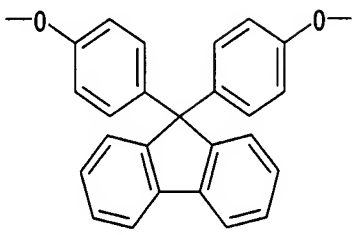


,

i.e., with no additional components, which is utilized in independent claims 1, 2, 15 and 16 of the present invention. As noted above, different chemical compositions generally behave differently, even if there may be a difference of only one carbon. In addition, as admitted by the Examiner, Katsukawa et al. fails to disclose the antioxidants of the instant claims. Thus, independent claims 1, 2, 15 and 16 of the present invention are submitted to be patentable under 35 U.S.C. §103(a) over Katsukawa et al. (USPN 6,187,493).

Kanamura et al. also does not teach or suggest the "naked" biphenyl fluorene repeating

unit of Formula (1)



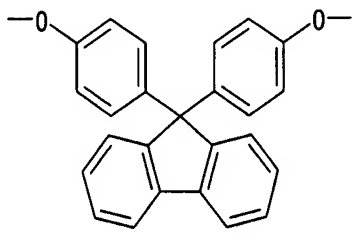
i.e., with no additional components, which is utilized in independent claims 1, 2, 15 and 16 of the present invention. As recited by the Examiner, Kanamura et al., in col. 198, recites an antioxidant in accordance with the instant claims.

The following description (from http://www.ideafinder.com/history/inventions /story074.htm), which is known to those skilled in the art, shows how difficult it is to utilize combinations of elements to obtain desired results:

> In the period from 1878 to 1880 Edison and his associates worked on at least three thousand different theories to develop an efficient incandescent lamp. Incandescent lamps make light by using electricity to heat a thin strip of material (called a filament) until it gets hot enough to glow. Many inventors had tried to perfect incandescent lamps to "sub-divide" electric light or make it smaller and weaker than it was in the existing arc lamps, which were too bright to be used for small spaces such as the rooms of a house.
>
> Edison's lamp would consist of a filament housed in a glass vacuum bulb. He had his own glass blowing shed where the fragile bulbs were carefully crafted for his experiments. Edison was trying to come up with a high resistance system that would require far less electrical power than was used for the arc lamps. This could eventually mean small electric lights suitable for home use.
>
> By January 1879, at his laboratory in Menlo Park, New Jersey, Edison had built his first high resistance, incandescent electric light. It worked by passing electricity through a thin platinum filament in the glass vacuum bulb, which delayed the filament from melting. Still, the lamp only burned for a few short hours. In order to improve the bulb, Edison needed all the persistence he had learned years before in his basement laboratory. He tested thousands and thousands of other materials to use for the filament. He even thought about using tungsten, which is the metal used for light bulb filaments now, but he couldn't work with it given the tools available at that time.
>
> One day, Edison was sitting in his laboratory absent-mindedly rolling a piece of compressed carbon between his fingers. He began carbonizing materials to be used for the filament. He tested the carbonized filaments of every plant imaginable, including baywood, boxwood, hickory, cedar, flax, and bamboo. He even contacted biologists who sent him plant fibers from places in the tropics. Edison acknowledged that the work was tedious and very demanding, especially on his workers helping with the experiments. He always recognized the importance of hard work and determination. "Before I got through," he recalled, "I tested no fewer than 6,000 vegetable growths, and ransacked the world for the most suitable filament material."
>
> Edison decided to try a carbonized cotton thread filament. When voltage was applied to the completed bulb, it began to radiate a soft orange glow. Just about fifteen hours later,

the filament finally burned out. Further experimentation produced filaments that could burn longer and longer with each test. By the end of 1880, he had produced a 16-watt bulb that could last for 1500 hours and he began to market his new invention.

In the present instance, since neither Katsukawa et al. nor Kanamura et al. teaches or suggests the biphenyl fluorene repeating unit of Formula (1)



of independent claims 1, 2, 15 and 16 of the present invention, and different chemical entities are submitted to have different chemical characteristics, claims 1, 2, 15 and 16 are submitted to be patentable under 35 U.S.C. §103(a) over Katsukawa et al. (USPN 6,187,493) and/or Kanamura et al. (USPN 6,043,334), alone or in combination.

Since claims 3, 4-6, 8, 7, and 10-13 depend from claims 1 and 2, respectively, claims 3, 4-6, 8, 7, and 10-13 are submitted to be patentable under 35 U.S.C. §103(a) over Katsukawa et al. (USPN 6,187,493) and/or Kanamura et al. (USPN 6,043,334), alone or in combination, for at least the reasons that claims 1 and 2 are submitted to be patentable under 35 U.S.C. §103(a) over Katsukawa et al. (USPN 6,187,493) and/or Kanamura et al. (USPN 6,043,334), alone or in combination.

C. In the Office Action, at pages 8-9, claims 1-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yokota et al. (US Patent Application Publication 2004/0009419) in view of Kanamura et al. (USPN 6,043,334).

Claims 9 and 14 have been cancelled without prejudice or disclaimer.

As an initial point of clarification, Yokota et al. was first published on January 15, 2004, based on an application filed on June 12, 2003, whereas the instant application was filed in the United States on July 14, 2003, and claims priority to Korean Patent Application No. 2002-44502, which was filed on July 27, 2002. As such, it is respectfully submitted that Yokota et al does not qualify as prior art under 35 U.S.C. §102.

Additionally, the date of invention in the instant invention is at least July 27, 2002, which is the foreign priority date based upon the prior filing of the foreign counterpart to the instant application in the Korean Intellectual Property Office. A copy of the foreign counterpart was previously filed, as acknowledged by the Examiner on page 1 of the Office Action.

Further, enclosed is an English translation of Korean Application No. 2002-44502, along with a corresponding statement from the translator in compliance with 37 CFR 1.55(a)(4). As such, it is respectfully submitted that the applicants have established a date of invention of at least July 27, 2002. MPEP 210.15. Since this date of invention is prior to the filing of Yokota et al. on June 12, 2003, Yokota et al. does not qualify as prior art under 35 U.S.C. 102(e) as it was not "described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent." Therefore, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 1-20 in view of Yokota et al.

As recited under **B** above, claims 1, 2, 15 and 16 are submitted to be patentable under 35 U.S.C. §103(a) over Kanamura et al. (USPN 6,043,334). Since claims 17-20 recite the electrophotographic photoreceptors of claims 1 and 2, respectively, which are submitted to be patentable over Kanamura et al. (USPN 6,043,334), claims 17-20 are submitted to be patentable under 35 U.S.C. §103(a) over Kanamura et al. (USPN 6,043,334) for at least the reasons that claims 1 and 2 are submitted to be patentable under 35 U.S.C. §103(a) over Kanamura et al. (USPN 6,043,334).

PROVISIONAL DOUBLE PATENTING:

In the Office Action, at pages 9-10, claims 1-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of co-pending application no. 10/459,720 (corresponds to US Patent Application Publication 2004/0009419) in view of Kanamura et all (USPN 6,043,334).

Claims 15, 17 and 19 have been amended to correct a typographical error - that is, claims 15, 17 and 19 have been amended to recite the photoreceptor of claim 1 and delete the photoreceptor of claim 2. Thus, claims 15, 17 and 19 are submitted to be non-obvious.

Since co-pending application no. 10/459,720 has not yet been allowed, and since all of the of the claims of the instant application have not yet been indicated as allowable except for the provisional rejection and are subject to change by amendment, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature. MPEP 804(I)(B). As such, it is respectfully requested that the applicants be allowed to address any obviousness-type double patenting issues remaining once the rejection of the claims under 35 U.S.C. §103 is resolved or on allowance of co-pending application no. 10/459,720.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding

objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: April 25, 2005 By: Darleen J. Stockley

Darleen J. Stockley
Registration No. 34,257

1201 New York Avenue, N.W.
Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501